

# PATENT COOPERATION TREATY

From: INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

LLOYD WISE

10 NOV 2004

RECEIVED

To:

**DUE DATE**

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Tanjong Pagar  
PO Box 636  
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17/1/05

**ENTERED**

**PCT**

WRITTEN OPINION  
(PCT Rule 66)

Applicant's or agent's file reference  
FP2130/aw

Date of mailing  
(day/month/year)

17 NOV 2004

REPLY DUE

within **TWO MONTHS**  
from the above date of mailing

International Application No.

**PCT/SG2003/000294**

International Filing Date (day/month/year)

**30 December 2003**

Priority Date (day/month/year)

**30 December 2003**

International Patent Classification (IPC) or both national classification and IPC

Int. Cl. <sup>7</sup> **G01N 21/88, 21/958**

Applicant

**AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH et al**

1. This written opinion is the **first** drawn by this International Preliminary Examining Authority.

2. This opinion contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☒ Certain observations on the international application

3. The **FINAL DATE** by which the international preliminary examination report must be established according to Rule 69.2 is:  
**30 April 2006**

4. The applicant is hereby invited to reply to this opinion.

**When?** See the Reply Due date indicated above. However, the Australian Patent Office will not establish the Report before the earlier of (i) a response being filed, or (ii) one month before the Final Date by which the international preliminary examination report must be established. The Report will take into account any response (including amendments) filed before the Report is established. If no response is filed by 1 month before the Final Date, the international preliminary examination report will be established on the basis of this opinion. Applicants wishing to have the benefit of a further opinion (if needed) before the report is established should ensure that a response is filed at least 3 months before the Final Date by which the international preliminary examination report must be established.

**How?** By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

**Also** For an additional opportunity to submit amendments, see Rule 66.4. For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4bis. For an informal communication with the examiner, see Rule 66.6.

Name and mailing address of the IPEA/AU

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**JULIA HU**

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**I. Basis of the opinion**

**1. With regard to the elements of the international application:\***

- ☒ the international application as originally filed.
- ☐ the description, pages , as originally filed,  
pages , filed with the demand,  
pages , received on with the letter of
- ☐ the claims, pages , as originally filed,  
pages , as amended under Article 19,  
pages , filed with the demand,  
pages , received on with the letter of
- ☐ the drawings, pages , as originally filed,  
pages , filed with the demand,  
pages , received on with the letter of
- ☐ the sequence listing part of the description:  
pages , as originally filed  
pages , filed with the demand  
pages , received on with the letter of

**2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.**

These elements were available or furnished to this Authority in the following language which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

**3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the written opinion was drawn on the basis of the sequence listing:**

- ☐ contained in the international application in printed form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

**4. The amendments have resulted in the cancellation of:**

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/fig.

**5. ☐ This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed"

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V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims 1-43	YES
	Claims	NO
Inventive step (IS)	Claims 1-43	YES
	Claims	NO
Industrial applicability (IA)	Claims 1-43	YES
	Claims	NO

2. Citations and explanations

NOVELTY (N) AND INVENTIVE STEP (IS) claims 1-43

The invention of the claims is a method/apparatus for detecting faults within a transparent panel, comprising placing a light-transmissive interface in contact with the panel and transmitting a beam of light through the interface into the panel, and propagating within the panel along a path where total internal reflection is realized at surfaces of the panel; and observing the light scattered by the faults and exiting the panel.

All of the documents cited in the International Search Report were category "A" only. No individual citation or obvious combination of citations disclose or fairly suggest such a method/apparatus.

The closest art of JP 2001-305072 and JP 2000-074848 each discloses a method/apparatus where scattered light from a defect is detected while light propagates through a transparent panel/substrate by total internal reflection. However, there is no light transmissive interface in contact with the transparent panel.

## VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

1. Claim 1 is not clear because there is no antecedent to *the glass panel* (page 18 lines 5, 7, 8 & 9). It is noted that only a transparent panel is pre-defined.
2. Claim 25 is directed to an apparatus for detecting faults within a transparent panel, however, there is no component/means defined throughout the claim that describes how faults are actually detected. In other words, the detection of scattered light which appears to be an essential feature of the invention is not defined in the independent claim.
3. Claim 38 is not clear because I cannot see an antecedent to *the scattered light*.

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